

UCLA CEE 141: Structural Steel Design

Fall 2018

Class Project Assignment



Westwood Blvd.
Los Angeles, CA 90024

MEMO

Date: November 27, 2018

To: CE 141 Student Engineering Firms

From: Susie Bruin, AIA, Principal Architect

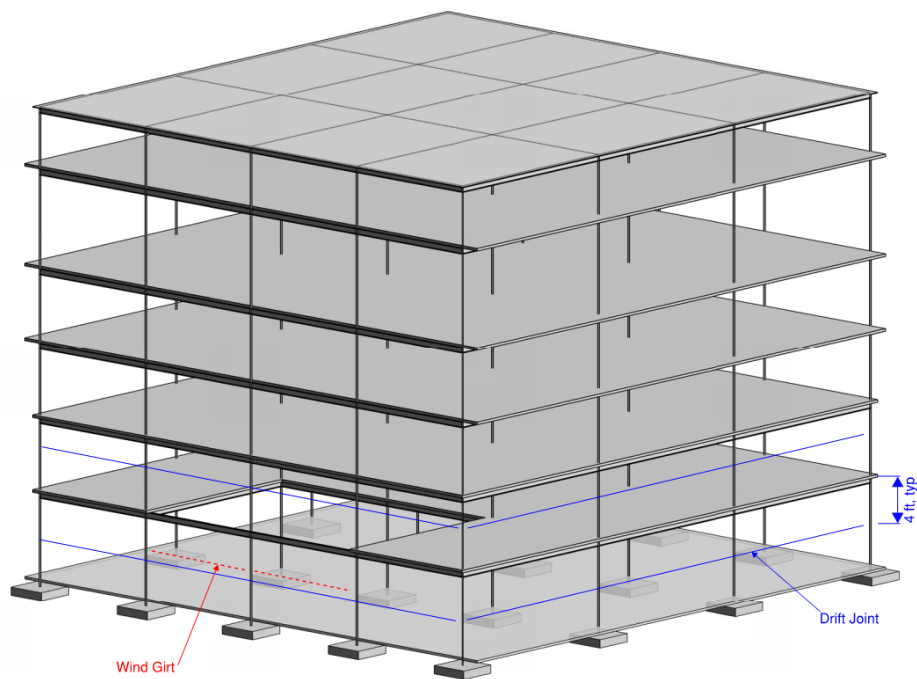
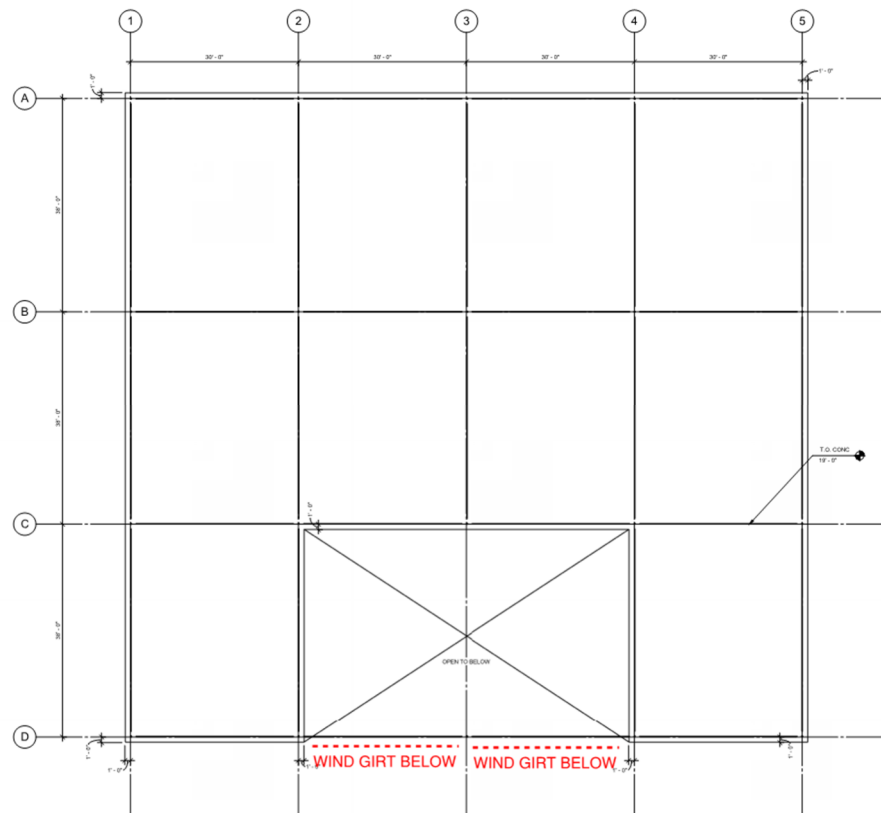
Re: West Coast Office Headquarters for Yoogle
Increment 4: Wind Girt Design

Please fulfill the following requirements for Increment 4 of the project. Increment 4 is to be included in the final project submittal, due Friday, December 7, 2018 at 6 pm.

- Design the wind girts that exist below Level 2 on Grid D between Grid 2 and 4. The drift joint for the exterior wall system exists 4 ft below each level. You may assume that the wind girt is at this same elevation.
 - o Design an HSS section to meet strength and deflection requirements.
 - o You may assume the wind loading to be 30 psf, normal to the surface of the wall.
 - o You must take into account the out-of-plane wind load as well the exterior wall dead load that is tributary to the wind girt.
 - o In addition to code deflection limits, the maximum wind deflection that is allowed is $L/180$ or 1", whichever governs.
 - o See attached conceptual sketches.
- Verify the column at Grid intersection D/3 is adequate as a beam-column considering the added out-of-plane load from the wind girt. Use the axial load calculated in Increment 1, incorporating any owner comments.
- Submit your design calculations

Note that the drawings and calculations for this Increment are not to be presented separately, but are to be included in the overall drawings and calculation package submitted for the final project. Refer to the example drawings provided for examples of connection details and general notes. Also make sure that all requirements in the Project Overview Letter are fulfilled in the final project submittal!

UCLA CEE 141: Structural Steel Design
Fall 2018
Class Project Assignment

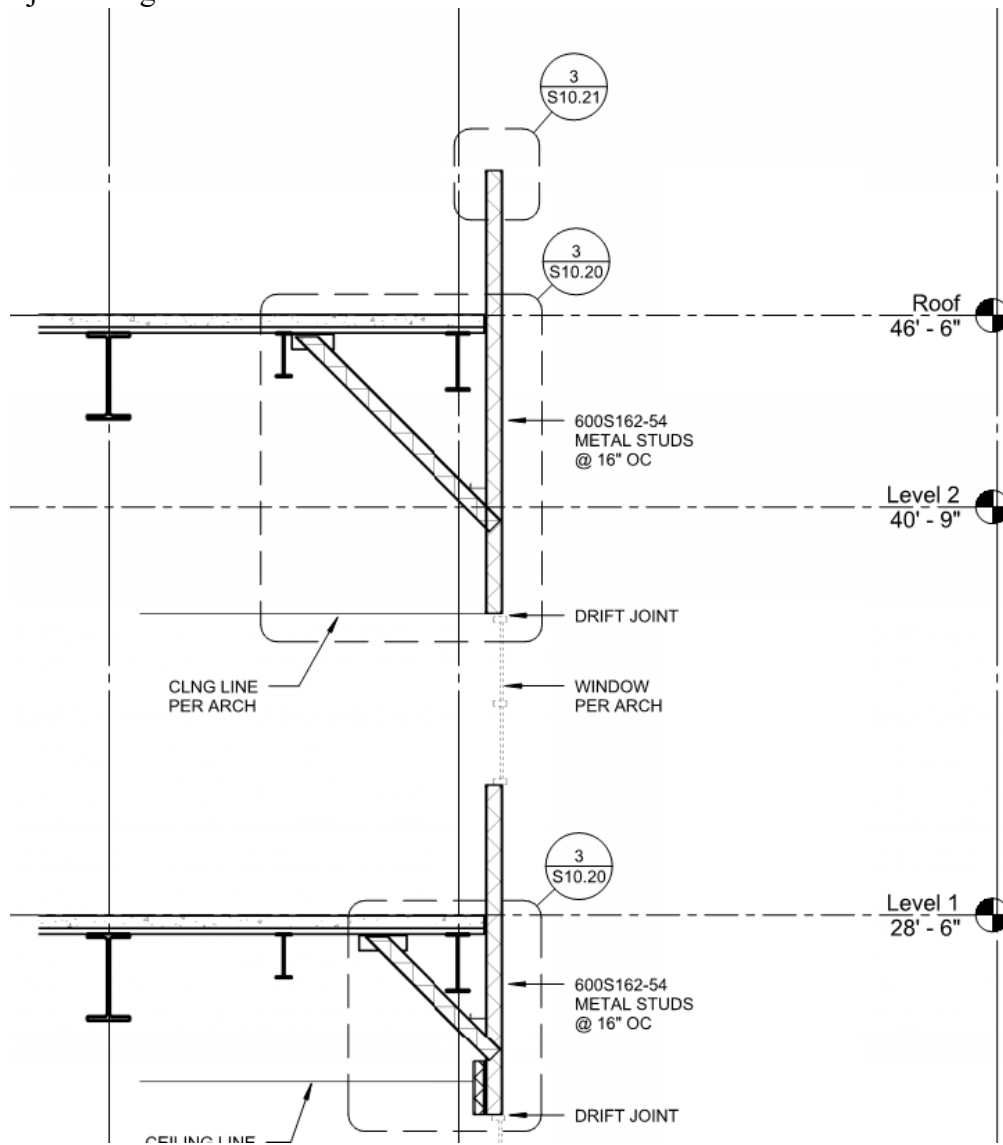


Wind Girt Concept

UCLA CEE 141: Structural Steel Design

Fall 2018

Class Project Assignment

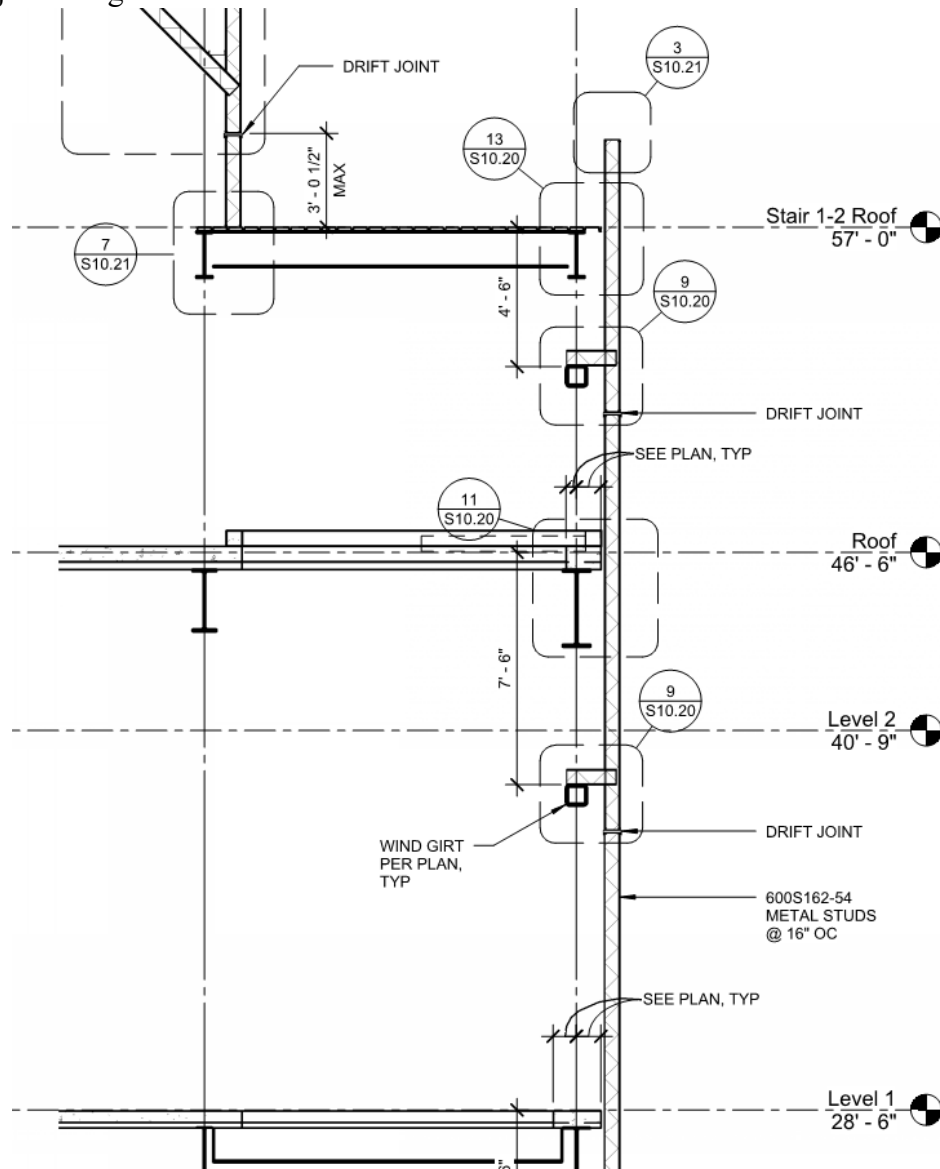


Typical Construction WITHOUT Wind Girt for Reference

UCLA CEE 141: Structural Steel Design

Fall 2018

Class Project Assignment



Typical Construction WITH Wind Girt for Reference